

REMARKS

By the present amendment, each of the independent claims of this application previously reciting the feature of a "variable spatial filter" have been amended to recite the feature of a pitch variable spatial filter in which a light cutting portion of the pitch variable spatial filter is pitch variable according to the pattern formed on the substrate. Applicants note that the pitch variable spatial filter is represented, for example, by the pitch variable spatial filter 1270 as illustrated in Fig. 19 of the drawings of this application.

As described at page 39, line 27 to page 40, line 2 of the specification of this application, Fig. 19 shows an example of a pitch variable spatial filter 1270 using a metallic plate. As further described at page 40 of the specification, with respect to the variable spatial filter illustrated in Fig. 19, all that is required for positioning spatial filter is merely matching the pitch of linear patterns with a central linear pattern as a reference and to this end, a pitch varying mechanism for the spatial filter can be constituted easily. Fig. 20 illustrates a construction of the pitch variable spatial filter 1270 and as described at page 40, line 19 to page 41, line 6:

As illustrated therein, the spatial filter 1270 comprises a plurality of linear patterns 1271 formed on of a material high in light transmitting rate such as, for example, a metal, a metal oxide or plastic material, spring-like support members 1272, support members 1273, a fixing means 1274, a screw 1275 and a screw driving means 1276. The screw 1275 has right-hand threads formed in its portion 1277 and left-hand threads formed in its portion 1278. The pitch between adjacent linear patterns 1271 can be changed-by rotating the screw 1275 through the screw driving means 1276. In the operation of the screw driving means 1276, the pitch between adjacent linear patterns 1271 is controlled in accordance with a calculated value on the basis of a cell pitch d detected simultaneously with a chip pitch p at the time of introduction of the wafer. (emphasis added)

It is apparent that at least the aforementioned pitch d is representative of the pattern formed on the substrate. That is, as described at page 42, lines 18-26 of the specification, a linear pattern pitch on the wafer is d and Equation 9 is obtained and is necessary to establish a pitch varying mechanism which satisfies Equation 9. Thus, as pointed out, the pitch of the linear patterns of the spatial filter is varied according to the pattern formed on the substrate, as now recited in the claims of this application, which variability of the pitch of the linear patterns provides for a "pitch variable spatial filter" (emphasis added) as disclosed in the specification of this application and as now recited in each of the independent claims and therewith the dependent claims of this application. As pointed out at pages 41 and 42 of the specification, although Fig. 20 illustrates one example of a drive mechanism, other drive mechanisms may be adopted which enable driving of the linear patterns so as to provide high shielding performance wherein the linear patterns 1271 are movable so as to change the pitch thereof. As pointed out at page 44, lines 9 to 13 of the specification:

The above construction is advantageous in that the trouble of replacing the spatial filter for each product can be omitted because the spatial filter pitch can be changed automatically upon receipt of data such as chip pitch and cell pitch of product. (emphasis added)

Applicants submit that the cited art does not disclose or teach a pitch variable spatial filter as recited in the independent claims 1, 4, 6, 8, 10, 12, 15, 17, 20 and 22 and the dependent claims of this application, as will become clear from the following discussion.

The rejection of claims 1-27 under 35 U.S.C. 103(a) as being unpatentable over Kamoshida (4,571,685) in view of Koizumi et al (4,614,427) and Oshida et al (4,744,666) or Scheff et al (5,172,000) is traversed insofar as it is applicable to the present claims, and reconsideration and withdrawal of the rejection are respectfully requested.

As to the requirements to support a rejection under 35 U.S.C. 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under §103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the recent decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge".

The court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the

reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

In setting forth the Examiner's analysis of the cited art in relation to the features of claim 1, the Examiner contends that "Kamoshida discloses a detecting apparatus. However, Kamoshida does not explicitly disclose a particle detecting apparatus. Koizumi discloses a system for detecting a foreign particles...It would have been obvious to modify..." (emphasis added). Applicants submit that the Examiner has engaged in a hindsight reconstruction attempt of the present invention utilizing the principle of "obvious to try" which is not the standard of 35 U.S.C. 103. See In re Fine, supra.

Irrespective of the proposed combination of Kamoshida and Koizumi et al, the Examiner recognizes that "Koizumi does not disclose a variable spatial filter as claimed". (emphasis added) Applicants submit that Kamoshida also does not disclose a variable spatial filter as claimed. Additionally, in light of the amendment of claim 1 and the other independent claims of this application to recite the feature of a "pitch variable spatial filter" (emphasis added) in which the pitch is variable according to the pattern formed on the substrate, it is apparent that such features are also not disclosed or taught by Kamoshida or Koizumi et al in the sense of 35 U.S.C. 103.

The Examiner recognizing the deficiencies of Kamoshida and Koizumi et al therefore cites patents to Oshida et al and Scheff et al with the Examiner stating:

Oshida discloses a spatial filter which is variable according to a pattern of the wafer (abstract or column 2, lines 3-10). Scheff discloses the same spatial filter as claimed (abstract or figs. 4,5). It would have been obvious to modify Koizumi's detecting apparatus with the spatial filter as taught by Oshida or Scheff for inspecting different wafer patterns as taught by Scheff in column 1, lines 45-54.

Irrespective of the position by the Examiner concerning the disclosures of Oshida et al and Scheff et al, applicants submit that these references fail to disclose

or teach in the sense of 35 U.S.C. 103 a pitch variable spatial filter as disclosed and claimed in the independent and dependent claims of this application.

Turning to Oshida et al, irrespective of the fact that such patent is not directed to a foreign particle detection system, this patent does not disclose or teach a pitch variable spatial filter, as claimed. This fact is apparent from the disclosure at col. 4, lines 47-50, that "The spatial filter best suited for the alignment pattern of the wafer may be selected from a plural number of spatial filters." (emphasis added) Thus, Oshida et al discloses a spatial filter for a particular pattern and depending upon the pattern of the wafer, a selected one of a plurality of spatial filters respectively for different patterns is selected for utilization in the system. There is no disclosure or teaching in Oshida et al of a pitch variable spatial filter in which the pitch variable in accordance with the pattern of the substrate. Likewise, as described in connection with Fig. 5, at col. 5, lines 30-34 of Scheff et al, Fig. 5 is an enlarged diagram of a preferred design of the spatial filter 50 and is one example of a number of spatial filters included in a spatial filter library (not shown). Furthermore, Fig. 7 of Scheff et al, as described in col. 6, lines 58-67, is a graph showing the number of spatial filters 50 required in a spatial filter library for square and rectangular units cell circuit pattern 16 of different sizes. As indicated, depending upon the unit cell circuit pattern sizes may approach almost 3000 different filters (2840 filters as indicated in col. 6, line 66). Thus, it is readily apparent that neither Oshida et al nor Scheff et al disclose or teach in the sense of 35 U.S.C. 103 a pitch variable spatial filter, as claimed, and it cannot be considered obvious in the sense of 35 U.S.C. 103 to modify the cited art to provide the claimed invention. As such, applicants submit that the independent claims 1, 4, 6, 8, 10, 12, 15, 17, 20 and 22 and the dependent claims of this application patentably distinguish over the proposed combination of references of Oshida et al, Scheff et al, Kamoshida and Koizumi et al in the sense of 35 U.S.C. 103 and should be considered allowable thereover.

With respect to other features of independent and dependent claims of this application, the Examiner contends that features are inherent in the cited art or would have been known or obvious design choice. For example, with respect to the Examiner in relation to claims 2, 5, 23, 9, 14 and 19, the Examiner contends that "Koizumi inherently discloses the claimed limitation". Reference is made to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that to establish inherency if the prior art reference does not expressly set forth the claimed feature, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. Applicants submit that the Examiner has failed to establish inherency in accordance with such decision.

As to other features of the independent and dependent claims, the Examiner recognizes that the cited art does not disclose such features, but contends that such features would have been known or the skilled artisan would have been motivated to provide such features. For example, with respect to claim 6, the Examiner indicates "Koizumi does not disclose counting the defects. Counting the defects on the wafer would have been known. It would have been obvious a design choice...". The Examiner utilizes a similar analysis with respect to many other claimed features, which is not proper and has been rejected by the courts. See In re Lee, supra. Thus, the Examiner is utilizing applicants' disclosure against applicant which is not proper.

Accordingly, applicants submit that the Examiner's position that any features not disclosed in the cited art necessarily or inherent or obvious is not proper and the Examiner must cite art for such features with applicants submitting that any further

combination of the cited art again represents a hindsight reconstruction attempt in complete disregard of the teachings of the individual references, utilizing the principle of "obvious to try" which is not the standard of 35 U.S.C. 103. See In re Fine, supra. Thus, applicants submit that the independent and dependent claims patentably distinguish over the cited art in the sense of 35 U.S.C. 103 and should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that all claims present in this application should now be in condition for allowance, and issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicant's petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (501.30598CC3) and please credit any excess fees to such deposit account.

Respectfully submitted,



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